

### REMARKS

Claims 1 and 5 are amended, no claims are canceled, and no claims are added; as a result, claims 1-16 are now pending in this application.

No new matter has been added through the amendments to claims 1 and 5. Support for the amendments to claim 1 may be found throughout the specification, for example but not limited to the specification on page 2, line 34 through page 3, line 2, on page 3 at line 21, on page 4 at lines 12-15, on page 5 at lines 23-24, on page 6 at lines 13-14, and on page 7 at lines 7-10 and line 30. Support for the amendment to claim 5 may be found for example but not limited to claim 4 as originally filed.

### §103 Rejection of the Claims

#### § 103(a) Rejection of claims 1-11 and 13-16

Claims 1-11 and 13-16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Maillard (EP 0912052 A1) in view of Morrison (U.S. 5,815,671) in view of Wendorf (U.S. 5,469,431).

Applicant respectfully submits that claims 1-11 and 13-16 are not obvious, and thus are patentable, over the proposed combination of Maillard, Morrison, and Wendorf because this proposed combination fails to disclose or suggest all of the claimed subject matter included in claims 1-11 and 13-16.

#### Claim 1

It has not been disputed that Maillard does not disclose the insertion of content signals of a second type in time slots in contents signals of a first type or control information to control a decryptor in such a manner that the decryptor processes ECMs to deliver decrypted control words for descrambling at least the first type of content signals so as to maintain at the time slots for second type of content signals in the first type of content signals during playback of the program signal. The ECMs disclosed in Maillard contain only the control words encrypted by a

first key and transmitted in encrypted form (*See* Maillard, Abstract), and access criteria of an unspecified nature (*See* Maillard at column 7, lines 17-22).

The effect of this difference is that the broadcast service provided to the receivers cannot contain different advertisement slots. Thus, the broadcaster must allocate a separate one of the channels in the bouquet to a targeted receiver or group of receivers. An objective problem addressed by the presently claimed subject matter of claim 1 is thus to provide a method of controlling the use of a program signal in a system comprising a number of receivers, so as to ensure that a receiver receives a targeted program signal in an efficient manner.

This example problem is addressed by the method of claim 1 because the second type of content signals is inserted in time slots in the first type of content signals, the scrambled program signal is provided together with entitlement control messages (ECMs), and because at least a plurality of said ECMs containing the control words in an encrypted manner further comprises control information to control the decryptor in such a manner that the decryptor processes ECMs to deliver decrypted control words for descrambling at least the first type of content signals so as to maintain at least the time slots for second type of content signals in the first type of content signals during playback of the program signal. Insertion of content signals of the second type in time slots in the first type of content signals allows one, for example, to target a program signal at a particular sub-set of the number of receivers efficiently, since each receives the content signals of the first type. Because at least some of the ECMs containing the encrypted control words also contain the control information, and because the decryptor is generally a trusted, secure component, it can be guaranteed, for example, that content signals of the second type really are inserted. This is due to the fact that the ECMs are required to obtain the content signals of the first type in an unscrambled form, so that they must be provided to the decryptor, which can control the insertion of a time slot efficiently by withholding a next control word for the duration of the time slot.

Whilst it is true that Morrison discloses (claim 1) encoding program materials and message materials with signals identifying the respective materials and identifying when message material is to be inserted relative to program material, there is no disclosure in Morrison of ECMs containing the control words in an encrypted manner and further comprising control

information to control the decryptor in such a manner that a decryptor processes ECMs to deliver decrypted control words for descrambling at least the first type of content signals so as to maintain at least the time slots for second type of content signals in the first type of content signals during playback of the program signal. Instead, Morrison discloses that a break in program material for insertion of message material such as a commercial is preceded by a program break flag (*See Morrison at column 3, lines 38-43*). The program break flag described in Morrison comprises three of an available four bytes of code (*See Morrison at column 3, lines 56-57*), completely detailed in Table 1 of Morrison. There is no entry in Table 1 that corresponds to a control word contained in an encrypted manner. Morrison discloses that program materials which are received by a receiver are pre-selected by a subscriber, and that the receiver is provided with a corresponding code number which allows it to receive and store the pre-selected program materials (*See Morrison at column 3, lines 25-27*). To this end, an extracted digitized data signal is provided by a tuner to a conditional access circuit, which decodes the received data as authorized by a microcontroller ... and provides the decoded data on a lead for storage in a receiver memory (*See Morrison at column 5, lines 15-21*). There is no disclosure of providing the “proper key or command” in an ECM, much less as part of the Program Break Flag.

It follows that the claimed subject matter of claim 1 is not derivable by combining Maillard and Morrison, since neither publication discloses ECMs containing the control words in an encrypted manner and further comprising control information to control the decryptor in such a manner that a decryptor processes ECMs to deliver decrypted control words for descrambling at least the first type of content signals so as to maintain at least the time slots for a second type of content signals in the first type of content signals during playback of the program signal, as required by claim 1.

Like Maillard and Morrison, Wendorf also fails to disclose or suggest ECMs containing the control words in an encrypted manner and further comprising the control information as specified in claim 1 of the present application. Wendorf merely describes a Service Map Table referring to a service described as Entitlement Control Messages (*See Wendorf at column 6,*

lines 14-15 and 35-46). There is no disclosure or suggestion in Wendorf of the contents of the individual ECMs.

Thus, claim 1 of the present application defines a method for controlling the use of a program signal wherein at least a plurality of ECMs containing the control words in an encrypted manner further comprises control information to control a decryptor of a receiver in such a manner that the decryptor processes ECMs to deliver decrypted control words for descrambling at least the first type of content signals so as to maintain at least the time slots for second type of content signals in the first type of content signals during playback of the program signal. This feature is not known from any of disclosures, either alone or in combination, of Maillard, Morrison, or Wendorf. The method of claim 1 forms the basis for providing an effect not attainable using any of the techniques of Maillard, Morrison, or Wendorf, either alone or in combination, namely to guarantee the maintenance of time slots in first type of content signals for insertion of second type of content signals. This demonstrates that the subject-matter of claim 1 is not obvious in view of the proposed combination of Maillard, Morrison, and Wendorf.

For at least the reasons stated above, the proposed combination of Maillard, Morrison, and Wendorf fails to disclose or suggest all of the claimed subject matter included in claim 1. Therefore, claim 1 is not obvious, and is thus patentable, over the proposed combination of Maillard, Morrison, and Wendorf. Because the proposed combination of Maillard, Morrison, and Wendorf fails to disclose or suggest all of the claimed subject matter included in claim 1, the 35 U.S.C. § 103(a) rejection of claim 1 cannot stand.

#### Claims 2-11 and 13

Claims 2-11 and 13 depend from claim 1, and therefore include all of the claimed subject matter as recited in claim 1. For at least the reasons stated above with respect to claim 1, the proposed combination of Maillard, Morrison, and Wendorf fails to disclose or suggest all of the claimed subject matter included in claims 2-11, and 13, and so the 35 U.S.C. § 103(a) rejection of claims 2-11 and 13 cannot stand.

#### Claims 14-16

The subject-matter of claim 14 is not obvious, and thus is patentable over the proposed combination of Maillard, Morrison, and Wendorf by virtue of the fact that it involves a receiver for carrying out the method of claim 1, which, for at least the reasons stated above, is not obvious and is patentable over the proposed combination of Maillard, Morrison, and Wendorf.

Claims 15-16 depend from claim 14, and therefore include all of the claimed subject matter recited in claim 14. For at least the reasons stated above with respect to claim 14, the proposed combination of Maillard, Morrison, and Wendorf fails to disclose or suggest all of the claimed subject of claims 15-16.

Thus, for at least the reasons stated above, the proposed combination of Maillard, Morrison, and Wendorf fails to disclose or suggest all of the claimed subject matter included in claims 14-16, and so the 35 U.S.C. § 103(a) rejection of claims 14-16 cannot stand.

*The Final Office Action fails to state a prima facie case of obviousness with respect to claims 1-11 and 13-16 because one of ordinary skill in the art would not be motivated to form the proposed combination of documents used in rejecting claims 1-11 and 13-16 as suggested in the Final Office Action.*

The Examiner has the burden under 35 U.S.C. § 103 to establish a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). To do that the Examiner must show that some objective teaching in the prior art or some knowledge generally available to one of ordinary skill in the art would lead an individual to combine the relevant teaching of the references. *Id.*

The *Fine* court stated that:

Obviousness is tested by "what the combined teaching of the references would have suggested to those of ordinary skill in the art." *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 878 (CCPA 1981)). But it "cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination." *ACS Hosp. Sys.*, 732 F.2d at 1577, 221 USPQ at 933. And "teachings of references can be combined *only* if there is some suggestion or incentive to do so." *Id.* (emphasis in original).

In rejecting claims 1-11 and 13-16, the Final Office Action relies on the proposed combination of Maillard, Morrison, and Wendorf. In an attempt to meet the requirements for forming this proposed combination, the Final Office Action on pages 7-8 states,

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Morrison with the system of Maillard because Morrison teaches an efficient and practical method to insert a variety of services containing commercial or other message services into the routine program material in a relative and real-time manner (Morrison: see for example Column 1 Line 38-50 and Column 11 Line 20-25).

However, Morrison teaches a system whereby program material is stored in decoded form, whilst Maillard teaches a system aimed at ensuring that digital data is securely recorded so that it cannot easily be used to generate pirate copies (*See* Maillard, column 2, lines 22-24). Hence, the two systems are incompatible, and the skilled person has no incentive to combine them.

Further, Wendorf discloses aims relating to the maximisation of the utilisation of spectrum capacity in a multi-service digital transmission system (*See* Wendorf at column 2, lines 8-11), involving the minimisation of transmission overhead (*See* Wendorf at column 2, lines 23-37), and a time-varying allocation of channels in a multi-channel, multi-frequency band transmission system (*See* Wendorf at column 2, lines 12-13). Such objects are largely unrelated to the problem of controlling the use of a program signal in a system comprising a number of receivers so as to ensure that a receiver receives a targeted program signal in an efficient manner. Thus, one of ordinary skill in the art would not have an incentive to combine Wendorf with Maillard or Morrison to arrive at the claimed subject matter included in claims 1-11 and 13-16.

For at least the reasons stated above, those of ordinary skill in the art would have no incentive to combine the teachings of Maillard, Morrison, and Wendorf as suggested in the Final Office Action, and thus the Final Office Action fails to state a *prima facie* case of obviousness with respect to claims 1-11 and 13-16.

Applicant respectfully requests withdrawal of the rejection, and reconsideration and allowance of claims 1-11 and 13-16.

§ 103(a) Rejection of claim 12

Claim 12 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Maillard (Patent No. EP 0912052 A1) in view of Morrison (U.S. 5,815,671) and in view of Wendorf (U.S. 5,469,431) and in view of Takahisa et al. (U.S. 5,577,266).

Claim 12 depends from claim 1, and therefore includes all of the claimed subject matter recited in claim 1. Applicant believes they have established that the proposed combination of Maillard, Morrison, and Wendorf fails to disclose or suggest all of the claimed subject matter included in claim 1. Therefore, the proposed combination of Maillard, Morrison, and Wendorf also fails to disclose or suggest all of the claimed subject matter included in claim 12.

Further, Applicant's representatives fail to find in, and the Final Office Action fails to point out where the claimed subject matter included in claim 12 and missing from the proposed combination of Maillard, Morrison, and Wendorf is disclosed or suggested by Takahisa et al.

Thus, the proposed combination of Maillard, Morrison, Wendorf, and Takahisa et al. fails to disclose or suggest all of the claimed subject matter included in claim 12. Therefore, the 35 U.S.C. § 103 rejection of claim 12 cannot stand.

Also, and for at least the reasons stated above, one of ordinary skill in the art at the time of the invention would not be motivated to combine, Maillard, Morrison, and Wendorf. Therefore, the Final Office Action also fails to establish a proper basis for forming the proposed combination of Maillard, Morrison, Wendorf, and Takahisa et al., and so the Final Office Action fails to establish a *prima facie* case of obviousness with respect to claim 12.

For at least the reasons stated above, Applicant respectfully requests withdrawal of the rejection, and reconsideration and allowance of claim 12.

Reservation of Rights

Applicant does not admit that references cited under 35 U.S.C. §§ 102(a), 102(e), 103/102(a), or 103/102(e) are prior art, and reserves the right to swear behind them at a later

**AMENDMENT AND RESPONSE UNDER 37 CFR § 1.116 – EXPEDITED PROCEDURE**

Serial Number: 09/914,127

Filing Date: August 21, 2001

Title: METHOD FOR CONTROLLING THE USE OF A PROGRAM SIGNAL IN A BROADCAST SYSTEM, AND CONTROL  
DEVICE FOR A CARRYING OUT SUCH A METHOD

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Page 14

Dkt: 2069.012US1

date. Arguments presented to distinguish such references should not be construed as admissions that the references are prior art.



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**CONCLUSION**

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney 408-278-4042 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

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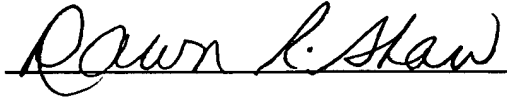
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**CERTIFICATE UNDER 37 CFR 1.8:** The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop AF, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 26<sup>th</sup> day of June, 2006.

Dawn R. Shaw

Name

  
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